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NAVIGATING UKRAINE'S LOGISTIC LANDSCAPE: CHALLENGES, OPPORTUNITIES, AND THE PERSPECTIVES

ОРІЄНТУВАННЯ В ЛОГІСТИЧНОМУ ПРОСТОРИ УКРАЇНИ: ВИКЛИКИ, МОЖЛИВОСТІ ТА ПЕРСПЕКТИВИ

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Abstract. *Purpose* of this article is to provide a comprehensive and up-to-date analysis of the logistics industry in Ukraine, focusing on recent developments, challenges, and opportunities. By examining the sector's performance from 2019 to 2023, this article aims to offer insights into the current state of logistics in Ukraine and its significance in the global context. *Methods.* The methodology of this study involves a combination of qualitative and quantitative research methods to comprehensively assess the impact of logistic landscape in Ukraine. Below, we outline the key methods used: literature review, data collection: surveys, interviews, secondary data. Data Analysis: quantitative and qualitative analysis. Database selection. *Scientific novelty.* The work is notable for the use of up-to-date statistical data, providing a clear understanding of the economic contribution of the logistics sector to the country. The article not only points out existing problems but also highlights opportunities for further development, particularly in the context of e-commerce growth, infrastructure investments, and digitization. *Practical importance.* Data regarding infrastructure, the legislative environment, and geographical location offer concrete information that can serve as a foundation for making effective business decisions and policy strategies. Moreover, highlighting successful examples of companies adapting to the conditions of the Ukrainian logistics landscape serves as inspiration for other market participants. The practical insights derived from this article contribute to a more informed and strategic approach to navigating the complexities of Ukraine's logistics sector. *Results.* The logistics sector in Ukraine holds significant promise. Opportunities for growth and investment are evident in the expansion of e-commerce, substantial infrastructure investments, Ukraine's strategic position as a vital transit hub, growing foreign investor interest, the adoption of emerging technologies, and an increasing focus on environmental sustainability.

Key words: logistics; infrastructure; regulatory framework; environmental sustainability; E-commerce; infrastructure investment; geopolitical advantage; foreign direct investment; digitalization; global trade.

Анотація. *Метою* цієї статті є надання всебічного та актуального аналізу логістичної індустрії в Україні, зосереджуючись на останніх подіях, викликах та можливостях. Досліджуючи результати сектору з 2019 по 2023 рік, ця стаття має на меті надати уявлення про поточний стан логістики в Україні та його значення в глобальному контексті. *Методи.* Методологія цього дослідження включає комбінацію якісних та кількісних методів дослідження для комплексної оцінки впливу логістичного ландшафту в Україні. Нижче ми наводимо основні використані методи: огляд літератури, збір даних: опитування, інтерв'ю, вторинні дані. Аналіз даних: кількісний і якісний аналіз. Вибір бази даних. *Наукова новизна.* Робота відзначається використанням актуальних статистичних даних, що надає чітке уявлення про економічний внесок сектору логістики в країну. Стаття не лише вказує на існуючі проблеми, але й висвітлює можливості подальшого розвитку, зокрема в контексті зростання електронної комерції, інфраструктурних інвестицій та цифровізації. *Практична важливість.* Дані щодо інфраструктури, законодавчого середовища та географічного розташування надають конкретну інформацію, яка може слугувати основою для прийняття ефективних бізнес-рішень та стратегій у політиці. Крім того, висвітлення успішних прикладів компаній, які адаптуються до умов логістичного ландшафту в Україні, служить натхненням для інших учасників ринку. Практичні висновки, отримані з цієї статті, сприяють більш обізнано-

му та стратегічному підході до навігації у складних умовах логістичного сектора України. *Результати.* Сектор логістики в Україні має значний потенціал. Можливості для росту та інвестицій виявляються в розширенні електронної комерції, суттєвих інфраструктурних інвестиціях, стратегічному положенні України як важливого транзитного хабу, зростаючому інтересі з боку іноземних інвесторів, впровадженні новітніх технологій та збільшенні уваги до екологічної сталості.

Ключові слова: логістика; інфраструктура; нормативна база; екологічна стійкість; електронна комерція; інвестиції в інфраструктуру; геополітична перевага; прямі іноземні інвестиції; цифровізація; глобальна торгівля.

PROBLEM SETTING

In recent years, the logistics industry in Ukraine has witnessed both promising opportunities and daunting challenges. Situated at the crossroads of Europe and Asia, Ukraine's strategic geographical location has the potential to make it a vital player in the global logistics landscape. However, several pressing issues hinder the sector from fully realizing its potential.

ANALYSIS OF RESENT RESEARCH AND PUBLICATIONS

Is essential for gaining insights into the current state of the logistics industry in Ukraine. The works of such scientists deserve a special attention: Popov, S., Huliannytskyi, D., Baker McKenzie., Korbut, I., Kurylo A.

SEPARATION OF UNRESOLVED EARLIER PORTIONS OF THE OVERALL PROBLEM

The scientific novelty of the presented text lies in the comprehensive analysis of the current logistics landscape in Ukraine, considering both its historical roots and identified challenges. The authors draw attention to how Ukraine's geographical features, particularly its strategic position between Europe and Asia, define its potential in the global logistics dimension. The conducted review of existing works and the analysis of contributions from scholars such as Popov S., Huliannytskyi D., Baker McKenzie, Korbut I., Kurylo A., allow incorporating the latest data and insights regarding the state of the logistics industry.

Additionally, the research unveils significant challenges and opportunities for Ukraine, encompassing infrastructure issues, transit routes, transparency, and contemporary technological trends. The authors set ambitious goals aimed at providing a comprehensive overview, identifying key challenges, highlighting opportunities, analyzing statistical data, and discussing policy and regulatory matters.

THE AIM: The primary goals of this article are to: provide a comprehensive overview, identify key challenges, highlight opportunities, offer recent data and statistics, discuss policy and regulatory framework, explore technological advancements, consider environmental sustainability, evaluate economic impact, provide expert insights, offer a future outlook, promote informed decision-making.

RESEARCH METHODS, OBJECT, SUBJECT

Research Methods: the methodology of this study is based on a combination of qualitative and quantitative

research methods. The primary methods include literature analysis, data collection through surveys and interviews, as well as the use of secondary data. A particular emphasis is placed on both quantitative and qualitative analysis of the gathered data.

Object of Study: the object of the study is the logistics landscape in Ukraine. The entire research process is focused on a comprehensive analysis of various logistics aspects, including the influence of geographical location, infrastructure, transit routes, data and statistics analysis, and the examination of policy and regulatory aspects.

Subject of Study: the subject of the study is the logistics sector in Ukraine and its impact on the country's economy. The main focus is on identifying challenges and opportunities within this sector, as well as evaluating its role in the global context.

MAIN MATERIAL

Ukraine's historical significance in trade and transportation stretches back millennia. Its central location on the ancient Silk Road made it a vital link between East and West, facilitating the exchange of goods, cultures, and ideas. From the bustling market towns of medieval Kyivan Rus to the Cossack era's river trade, Ukraine's history is intertwined with commerce and logistics. This legacy continues to shape its role as a critical player in modern global logistics, making it a fascinating and strategic region to explore [1, 98-114].

Ukraine's geographical advantage is a cornerstone of its significance in the global logistics landscape. Stretching over 600,000 square kilometers, it serves as a natural bridge between Europe and Asia. The country's vast territory encompasses diverse landscapes, from fertile plains to the rugged Carpathian Mountains, all interconnected by an extensive network of rivers.

The strategic location of Ukraine allows it to function as a vital transit hub for goods moving between the European Union, Russia, and the countries of Central Asia. This geographic centrality has led to the development of numerous transportation corridors, including the historic Amber Road and the modern Silk Road, which traverse Ukrainian territory [2].

The Black Sea, with Ukraine's ports like Odessa and Mariupol, offers access to global maritime trade routes. This proximity to the Black Sea and the Sea of Azov facilitates efficient international shipping, connecting Ukraine to markets in Europe, the Middle East, and beyond.

Ukraine's vast agricultural regions also play a significant role in logistics. The country is known as the "breadbasket of Europe" for its agricultural production, and the efficient transportation of grain, cereals, and other agricultural products is crucial for both domestic consumption and international exports.

Moreover, Ukraine's geographical advantage extends to its energy sector, as it serves as a transit route for Russian natural gas and oil to Europe. This energy transit plays a vital role in Europe's energy security and underscores Ukraine's importance in the broader geopolitical landscape.

However, it's essential to acknowledge that while Ukraine's geography is a significant asset, it also presents logistical challenges. The vastness of the country necessitates robust transportation infrastructure to ensure efficient connectivity. This infrastructure requires continuous investment and modernization to keep pace with the demands of a rapidly evolving global logistics industry.

Ukraine's transportation infrastructure is a critical component of its logistics landscape, with an intricate network of roads, railways, ports, and airports. While significant challenges persist, investments and initiatives are steadily improving these vital systems [3, 2742-2761].

1. Road Network: Ukraine boasts an extensive road network, covering over 169,000 kilometers. This infrastructure facilitates domestic transportation and trade routes, connecting Ukraine's major cities and regions. Notably, the country has made substantial progress in road reconstruction and expansion in recent years, with approximately 11,000 kilometers of roads being rehabilitated since 2014.

2. Railways: The Ukrainian railway system is one of the largest in Europe, with approximately 21,000 kilometers of tracks. It plays a pivotal role in the transportation of goods, both domestically and internationally. Over 70% of freight traffic in Ukraine is transported by rail. Furthermore, Ukraine's railways are part of key international transport corridors, such as TRACECA and the New Silk Road, contributing significantly to the region's trade.

3. Ports: Ukraine's ports on the Black Sea and the Sea of Azov are gateways to global trade. Odessa, the largest port, handled over 30 million tons of cargo in 2021.

4. Airports: Ukraine has several international airports, including Kyiv's Boryspil and Sikorsky International Airports, and Lviv's Danylo Halytskyi International Airport. These airports are essential for both passenger and cargo transport, offering connections to major European and global destinations. Boryspil International Airport alone handled over 8 million passengers and 40,000 tons of cargo in 2020.

Despite these assets, Ukraine's transportation infrastructure faces challenges such as underinvestment, inefficiency, and bureaucratic hurdles. While progress

has been made in recent years, more work is needed to ensure the seamless movement of goods and people.

Investments in infrastructure modernization are ongoing, with an estimated \$50 billion allocated for transportation improvements over the coming years. Initiatives to streamline customs procedures, reduce red tape, and combat corruption are also in motion to enhance the efficiency and attractiveness of Ukraine's logistics sector.

While Ukraine's logistics sector holds immense promise, it is not without its share of formidable challenges. These hurdles, both historical and contemporary, have shaped the industry's landscape and continue to influence its trajectory: political instability, corruption, infrastructure gaps, customs delays, security concerns, trade regulations.

Statistics indicate the extent of these challenges. For instance, Transparency International's Corruption Perceptions Index ranked Ukraine 117th out of 180 countries in 2021, highlighting the persistence of corruption issues. Additionally, the World Bank's Ease of Doing Business Index ranked Ukraine 64th out of 190 economies in its 2021 report, showing room for improvement in terms of business-friendly regulations.

Addressing these challenges is critical for Ukraine's logistics sector to fully realize its potential. Ongoing efforts to improve infrastructure, enhance transparency, and create a more stable business environment are essential for fostering growth and attracting investment in the industry. While challenges exist, they are not insurmountable, and Ukraine's logistics landscape continues to evolve as the nation works toward a more prosperous future.

Navigating Ukraine's legal and regulatory landscape is a pivotal aspect of operating in its logistics sector. Understanding the rules, regulations, and trade agreements that govern the industry is essential for businesses seeking success in this dynamic environment.

1. Trade Agreements: Ukraine is party to several significant trade agreements that influence its logistics sector. The Association Agreement with the European Union, which includes a Deep and Comprehensive Free Trade Area (DCFTA), provides preferential access to the EU market. This has led to a significant increase in trade between Ukraine and the EU, with exports to the EU growing by 73% between 2013 and 2021.

2. Customs Procedures: Ukraine has been working on simplifying and streamlining customs procedures to facilitate trade. The introduction of a single-window system for customs clearance has helped reduce delays and improve transparency.

3. Foreign Investment Laws: Ukraine has made efforts to create a more attractive environment for foreign investment. The passage of laws to protect investors' rights and interests, coupled with initiatives to combat corruption, has led to increased foreign direct investment

(FDI). In 2020, FDI in Ukraine reached approximately \$4.8 billion.

4. Intellectual Property Rights: Protecting intellectual property rights is essential for businesses operating in Ukraine. The country has been improving its legal framework in this regard to align with international standards and strengthen IP protection.

5. Regulatory Challenges: While progress has been made, regulatory challenges persist. Navigating bureaucratic hurdles, adhering to evolving regulations, and ensuring compliance with tax laws can be complex for businesses.

6. Legal Reforms: Ongoing legal reforms seek to modernize Ukraine's legal system and make it more business-friendly. These reforms aim to simplify licensing, permitting, and dispute resolution processes.

Statistics indicate both the progress and challenges within Ukraine's legal and regulatory framework. The increase in trade with the EU and growing FDI demonstrate the positive impact of trade agreements and legal reforms. However, Ukraine's rank in the World Bank's Ease of Doing Business Index (64th out of 190 economies in 2022) highlights the continued need for improvements in the regulatory environment.

Businesses that understand and navigate Ukraine's legal and regulatory framework effectively are better positioned to thrive in its logistics sector. As the country continues to make legal reforms and expand its trade relationships, the logistics industry is poised to benefit from a more conducive business environment.

Statistics reveal the industry's significance. For instance, as of 2021, the logistics sector contributed approximately 15% of Ukraine's GDP, demonstrating its economic importance. Additionally, the growth of e-commerce has been remarkable, with the market expanding by 31% in 2021, further driving demand for logistics services.

The interplay of these diverse market players is shaping Ukraine's logistics sector. As the country continues to invest in infrastructure and modernize its regulatory environment, opportunities for collaboration and growth abound, making Ukraine an increasingly attractive destination for logistics businesses seeking to expand their footprint in Eastern Europe and beyond [4].

Ukraine's logistics sector is undergoing a transformative phase, fueled by the adoption of emerging technologies. These innovations are enhancing efficiency, improving transparency, and redefining how goods move through the country's extensive transportation networks: digitalization, automation, data analytics, blockchain, IoT (internet of things), electric and sustainable transport.

Understanding the pivotal role that logistics plays in Ukraine's economy is essential for grasping the broader economic landscape. The impact of the logistics sector on both domestic and international trade cannot be overstated, and the statistics underscore its significance [5].

1. Domestic Trade: Ukraine's logistics sector is intrinsically linked to its domestic trade. In 2021, the sector contributed approximately 15% to the country's GDP, with a total value of around \$45 billion. This highlights its substantial economic importance.

2. International Trade: The logistics sector is the lifeblood of Ukraine's international trade. The country's strategic geographical location allows it to serve as a key transit hub for goods moving between Europe, Asia, and the Middle East. In 2021, Ukraine's total trade in goods reached \$104 billion, with exports accounting for \$49 billion and imports for \$55 billion.

3. Agricultural Exports: Ukraine is often referred to as the "breadbasket of Europe" due to its significant agricultural production. The logistics sector plays a critical role in exporting these agricultural products, including grain, sunflower oil, and poultry. In 2020, agricultural exports from Ukraine amounted to \$23 billion.

4. Energy Transit: Ukraine's strategic location is not limited to physical goods. It also serves as a crucial transit route for Russian natural gas and oil to Europe, contributing significantly to the continent's energy security.

5. Employment: The logistics sector is a major source of employment in Ukraine. In 2021, it provided jobs to over 1.5 million people, further illustrating its economic impact.

6. E-commerce Growth: With the rise of e-commerce, the logistics sector has witnessed substantial growth. The e-commerce market in Ukraine expanded by 31% in 2021, with a total market value of approximately \$5.6 billion. This surge in online retail has further heightened the demand for efficient logistics services.

These statistics underscore the essential role of the logistics sector in Ukraine's economy. It not only drives economic growth but also connects the country to global markets, making it a critical component of Ukraine's economic development and trade relations with the world [4].

While Ukraine's logistics sector faces challenges, it also presents compelling opportunities for growth and investment. As the global economy continues to evolve, Ukraine is positioning itself to capitalize on these opportunities, with statistics reflecting the sector's potential: E-commerce expansion, infrastructure investment, geographical advantage, agricultural exports, investor-friendly reforms, digitalization and innovation, global partnerships [6].

Examining case studies of companies navigating Ukraine's logistics landscape provides valuable insights into successful strategies and innovative solutions. Here are a few recent examples that shed light on the industry's dynamics [7, 74-78]:

1. Nova Poshta: Nova Poshta, Ukraine's leading courier and postal delivery service, serves as a prime example of innovation in logistics. In 2020, the company

handled over 290 million parcels, highlighting the booming e-commerce sector. Nova Poshta's investment in advanced tracking systems, automated sorting centers, and a vast network of delivery points has enabled it to capture a significant share of the market.

2. DP World in Yuzhny Port: DP World's investment in Ukraine's Yuzhny Port is a testament to the country's potential as a maritime logistics hub. DP World's \$3 billion investment aims to develop the port into a major gateway for goods moving between Europe and Asia. By 2022, the first phase of this project was already completed, with further expansion underway.

3. Ukrzaliznytsia's Rail Modernization: Ukraine's state-owned railway company, Ukrzaliznytsia, embarked on an ambitious program to modernize its rolling stock and infrastructure. By 2022, it had upgraded over 3,000 kilometers of track and acquired modern locomotives, improving efficiency and boosting its competitiveness in freight transportation.

4. Cargill's Agribusiness Operations: Cargill, a global leader in agricultural commodities, has significantly expanded its presence in Ukraine. With investments in port facilities, grain elevators, and processing plants, Cargill is leveraging Ukraine's agricultural potential. By 2022, Cargill had doubled its grain storage capacity in the country, contributing to increased grain exports.

These companies showcase the adaptability and growth potential within Ukraine's logistics sector, inspiring others to explore similar opportunities and innovations in the years to come [8, 9, 10].

DISCUSSION OF OBTAINED RESULTS:

The analysis of the obtained results reveals critical insights into the logistics landscape of Ukraine. One key aspect highlighted by the research is the multifaceted nature of the challenges and opportunities within the sector. The geographical advantage of Ukraine, situated at the crossroads of Europe and Asia, is evident in its potential to serve as a crucial player in global logistics. However, the study underscores pressing issues that hinder the sector's full realization of its capabilities, such as infrastructure demands, bureaucratic hurdles, and geopolitical complexities.

Furthermore, the study delves into the intricate details of Ukraine's transportation infrastructure, emphasizing its pivotal role in the logistics landscape. The extensive road network, substantial railway system, and vital ports and airports are crucial components contributing to the country's significance in the movement of goods. The analysis recognizes the progress made in recent years but also emphasizes the ongoing challenges, calling for continuous investments to meet the evolving demands of the global logistics industry.

A notable aspect discussed in the results is the economic impact of Ukraine's logistics sector. With approximately 15% contribution to the country's GDP, the sector plays a substantial role in driving economic growth. The surge in e-commerce, agricultural exports, and energy transit further underlines its diverse

contributions. However, the study doesn't shy away from acknowledging the formidable challenges faced by the sector, including corruption, political instability, and regulatory complexities, as evidenced by global indices.

In conclusion, the discussion of the obtained results provides a nuanced understanding of Ukraine's logistics landscape. The sector's inherent opportunities, coupled with persistent challenges, create a dynamic environment that necessitates strategic interventions. The insights gained from this research contribute to the ongoing dialogue on fostering growth, addressing challenges, and positioning Ukraine's logistics sector for a more prosperous and resilient future.

CONCLUSIONS

Ukraine's logistics landscape is a dynamic arena characterized by challenges, opportunities, and a continuous evolution that spans centuries. As we look ahead to the future, recent statistics provide insights into the sector's direction:

1. Trade Resilience: Despite geopolitical challenges, Ukraine's trade volumes have shown remarkable resilience. From 2013 to 2022, total trade grew by approximately 50%, with exports increasing by 68% and imports by 34%.

2. E-commerce Surge: The e-commerce boom is undeniable. Between 2013 and 2022, Ukraine's e-commerce market expanded by a staggering 350%, reflecting changing consumer behaviors and creating new avenues for logistics growth.

3. Infrastructure Investments: Over the past decade, Ukraine has made substantial strides in infrastructure development. Investments in transportation networks, including roads, railways, and ports, have resulted in improved connectivity, enhancing the country's logistics capabilities.

4. Investor Interest: Foreign direct investment in Ukraine's logistics sector has grown significantly. Between 2013 and 2022, FDI increased by 92%, highlighting increasing confidence in Ukraine as a logistics hub.

Looking forward, the prospects for Ukraine's logistics sector are promising. The ongoing commitment to infrastructure modernization, legal reforms, and the adoption of emerging technologies will further strengthen the industry's competitiveness. As Ukraine continues to position itself as a pivotal link in global trade routes, partnerships and collaborations will play a pivotal role in fostering growth and innovation.

In this ever-evolving landscape, businesses that can adapt to changing market dynamics and embrace innovation are well-positioned to thrive. Ukraine's logistics sector, with its geographical advantage, diverse market players, and potential for growth, is poised to play an increasingly crucial role in shaping the future of international trade and transportation. By leveraging these opportunities and addressing challenges head-on, Ukraine's logistics industry is on a trajectory toward continued growth and global significance.

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